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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/577,544	05/24/2000	Albert Szu-chi Wang	1026-027/MMM 142422.1	5065
21034	7590	05/19/2004	EXAMINER	
IPSOLON LLP 805 SW BROADWAY, #2740 PORTLAND, OR 97205			DANG, DUY M	
			ART UNIT	PAPER NUMBER
			2621	
			DATE MAILED: 05/19/2004	

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/577,544

Applicant(s)

WANG, ALBERT SZU-CHI

Examiner

Duy M Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 23-27 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-39 is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10,12-16,18,19,21 and 22 is/are rejected.
- 7) ☐ Claim(s) 8,11,17 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2+3</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Applicant's election of Group I invention (Claims 1-22 and 28-39) in Paper No. 8 filed 2/26/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 23-27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II, there being no allowable generic or linking claim.
3. Applicant's amendment is advised to officially cancel claims 23-27 as being drawn to a nonelected invention in response to this Office Action.
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7, 9-10, 12-16, 18-19, and 21-22 rejected under 35 U.S.C. 102(b) as being anticipated by Weinberger et al (US Patent No. 5,680,129).

Regarding claim 1, Weinberger teaches an image encoding method (see figure 2 and col. 6 lines 11-12) comprising:

designating a current pixel to be encoded and defining a context region that includes multiple context pixels that are adjacent the current pixel, each of the context pixels having an image tone [see causal template 301 shown in figure 3 and mentioned in col. 7 lines 3-17. Note that the pixel denoted at "x" is the pixel being processed and thus such pixel x corresponds to the current pixel designated to be encoded; the pixels denoted at a-d correspond to the so called

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“multiple context pixels”; and the value of the pixels a-d corresponds to the so called “image tone” (this interpretation is consistent with applicant’s disclosed page 8 lines 10-11, that of “Each pixel has associated with it a value, called an image value, which corresponds to the color or tone, or other image characteristics of the pixel”];

quantizing the context region according to a pattern of unique image tones among the context pixels in the context region (see context quantizer 209 of figure 1. Note that the causal template 301 shown in figure 3 corresponds to the so called “a pattern of unique image tone among the context pixel in the context region”); and

encoding the current pixel with reference to the quantization of the context region (see encoder 209 of figure 2).

Regarding claim 2, Weinberger further teaches the pattern of unique image tones among the context pixels in the context region includes an indication of the number of unique image tones among the context pixels in the context region (see causal template 301 shown in figure 3. Note that there are 4 different pixels a-b adjacent to the current pixel x so the number 4 corresponds to “an indication of the number of unique image tones among the context pixel in the context region. This interpretation is consistent with applicant’s disclosed figure 8).

Regarding claim 3, Weinberger further teaches the pattern of unique image tones among the context pixels in the context region includes an indication of a non-local trend within the context pixels (see col. 16 line 3 where it states “a=b=c=d”. Note that this interpretation is consistent with applicant’s disclosed page 9 line 24 to page 10 line 2).

Regarding claim 4, Weinberger further teaches further teaches adaptive entropy coding (see col. 20 lines 64-65).

The advanced statement with applied to claim 1 above are incorporated herein. As to claim 5, Weinberger further teaches assigning a state to the context region according to the pattern unique image tone therein (see col. 12 lines 41-44. Note that the “case where  $a=b=c=d$  “ corresponds to the so called “a state”); and adaptive entropy coding (see col. 20 lines 64-65).

Regarding claims 6-7, it is noted that the claimed features are similar to the features called for in claim 3 above. Thus, claims 6-7 are also rejected for the same reasons as claim 3 above.

Regarding claim 9, Weinberger further teaches adaptive entropy coding includes arithmetic coding (see col. 20 lines 64-65).

Regarding claim 10, Weinberger further teaches the pattern of unique image tones is identified with reference only to context pixels that are immediately adjacent the current pixel (see causal template 301 in figure 3).

Regarding claim 12, Weinberger further teaches the pattern of tones is identified with reference to only four context pixels (Note the four context pixels a-d shown figure 3).

Regarding claim 13, Weinberger further teaches the current pixel may be encoded according to a previously encoded pixel having the same tone (see figure 3. Note the current pixel x is encoded according to the previously encoded pixels a-d. And the case  $a=b=c=d$  as stated in col. 12 line 42, refers to the so called “same tone”).

The advanced statement as applied to claim 5 above are incorporated herein. Regarding claim 14, Weinberger further software and computer readable medium (see col. 15 lines 20-33).

The advanced statement as applied to claims 6-7 above are incorporated herein.

Regarding claims 15-16, Weinberger further software and computer readable medium (see col. 15 lines 20-33).

The advanced statement as applied to claim 9 above are incorporated herein. Regarding claim 18, Weinberger further software and computer readable medium (see col. 15 lines 20-33).

The advanced statement as applied to claim 10 above are incorporated herein. Regarding claim 19, Weinberger further software and computer readable medium (see col. 15 lines 20-33).

The advanced statement as applied to claim 12 above are incorporated herein. Regarding claim 21, Weinberger further software and computer readable medium (see col. 15 lines 20-33).

The advanced statement as applied to claim 13 above are incorporated herein. Regarding claim 22, Weinberger further software and computer readable medium (see col. 15 lines 20-33).

6. Claims 8, 11, 17, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 28-39 are allowed.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy M Dang whose telephone number is 703-305-1464. The examiner can normally be reached on Monday to Thursday from 6:30AM to 5:00PM..

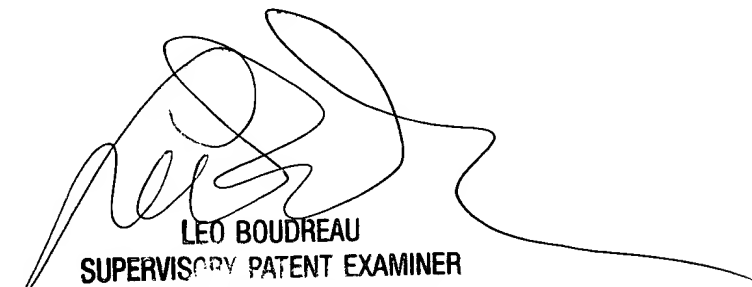
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*dmd*

dmd  
5/13/04



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